

Date: Thursday, 8/24/2006 11:10:19 AM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : BLADE FITTING
Job Number : 28318	
Estimate Number : 12299	
P.O. Number : N/A	Part Number : D3488041
This Issue : 8/24/2006 S.O. No. : N/A	Drawing Number : D3488 / DSK101
Prsht Rev. : NC	Project Number : N/A
First Issue : N/A Type : MACHINED PARTS	Drawing Revision : B / <i>06.08.24</i>
Previous Run : 26838	Material : N/A
Written By : _____	Due Date : 9/6/2006 Qty: 20 Um: Each
Checked & Approved By : _____	
Comment : Est Rev:A New Issue 06-02-28 JLM Est Rev:B As per Rev B 06-03-30 JLM	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D6103003	alum billet
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Comment: Qty.: 1.0000 Each(s)/Unit Total: 20.0000 Each(s)
 Aluminum Round Billet D6103-003
 Batch: *28336*

2.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE
-----	------------	----------------------------

RG

Issue 1.0 1987

11 16-09-28

Comment: MORI SEIKI CNC LATHE LARGE

1-Turn as per Dwg DSK 101 & Folio FA625

turn per dwg DSK 101
RG

2-Deburr

Receive & inspect for transit damage 10/4/20

3.0	QC3	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

BC / J.G 06/09/21 20

4.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
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Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine as per Folio FA625 & Dwg D3488

2-Deburr

ml 06/09/26 20

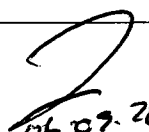

5.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

ml 06/09/26 20

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector	

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			
06-09-28	3	THICKNESS DIM ON DETAIL C IS 1.299". Drawing uses for calls for 1.312" Qty 1	PH 06-09-28 QSI 042	The attached report indicates deviation is acceptable and approved by D. Shephard	PH 06-09-28 QSI 042 06-09-28	 06-09-28		 06-09-28

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA:  Date: 06/10/19

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

Date: Thursday, 8/24/2006 11:10:19 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE FITTING

Job Number: 28318

Part Number: D3488041

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

J.G

06/09/29

20

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

JL

06/10/03 x 20

8.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

JL a.m

06/10/13 x 20

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

m/

06 10 13 x 20

10.0

ALS71032225

INSERT



Comment: Qty.: 4.0000 Each(s)/Unit Total: 80.0000 Each(s)

Pick:

Qty Part Number Description Batch

4 ALS7-1032-225 Insert M19393

a.m 06/10/17 (20)

11.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install Inserts as per Dwg D3488

a.m 06/10/17

(20)

12.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

FC 06 10 18

(20)

13.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: FP14

FC 06 10 18 20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

Date: Thursday, 8/24/2006 11:10:19 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE FITTING

Job Number: 28318

Part Number: D3488041

Job Number:



Seq. #:

Machine Or Operation:

Description :

14.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL
Inspection Level 21

2006/10/19

Job Completion



C 206/10/18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

DART AEROSPACE LTD		Work Order:	28318
Description: Blade Fitting, LH		Part Number:	D3488-1
Inspection Dwg: D3488	Rev: B	Page 1 of 1	

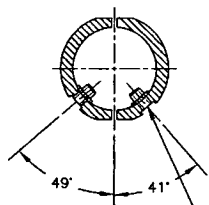
FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.125	+/-0.010	0.127	—			
2.620	+/-0.010	2.619	—			
0.793	+/-0.010	0.794	—			
1.351	+/-0.010	1.341	—			
1.317	+/-0.010	1.319	—			
90°	+/-0.1°	90°	—			
1.802	+/-0.010	1.801	—			
Ø0.508	+0.006/-0.001	Ø0.508	—			
R0.062	+/-0.010	R0.062	—			
1.500	+/-0.010	1.500	—			
8.000	+0.030/-0.000	8.006	—			
11.18	+/-0.030	11.177	—			
Ø0.484	+0.005/-0.001	Ø0.485	—			
1.180	+/-0.010	1.178	—			
3.150	+/-0.010	3.149	—			
3.070	+/-0.010	3.070	—			
0.590	+/-0.010	0.591	—			
0.125	+/-0.010	0.126	—			
1.005	+/-0.010	1.006	—			
3.500	+/-0.010	3.499	—			
Ø0.297	+0.005/-0.000	Ø0.497	—			
Ø0.430	+/-0.010	Ø0.430	—			
0.100	+/-0.010	0.103	—			

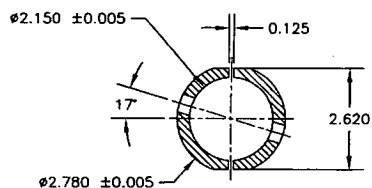
Measured by:	JML	Audited by:	EP	Prototype Approval:	N/A
Date:	06/09/26	Date:	06/09/26	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.03.31	New Issue	KJ/JLM	JML



SECTION B-B

Ø0.297
C'BORE Ø0.430 x 0.100
INSTALL ALS4-1032-225 (OR AKS4-1032-225
OR ALS7-1032-225 OR AKS7-1032-225)
INSERTS AFTER FINISH
(4 PLACES)



SECTION A-A

D3488-041/-042 BLADE FITTING ASSEMBLY PARTS LIST

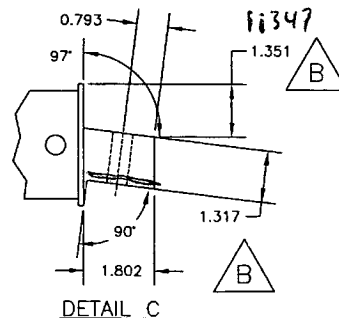
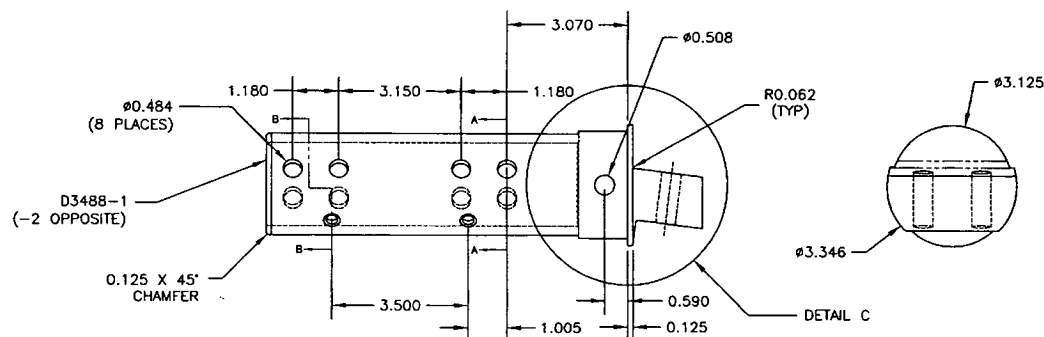
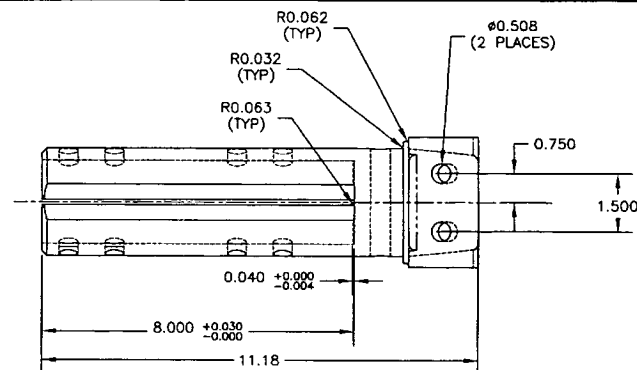
QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X	X	D3488-041	BLADE FITTING ASSEMBLY (LH)
		D3488-042	BLADE FITTING ASSEMBLY (RH)
1		D3488-1	BLADE FITTING (LH)
	1	D3488-2	BLADE FITTING (RH)
4	4	ALS4-1032-225 or AKS4-1032-225 or ALS7-1032-225 or AKS7-1032-225	INSERT

D3488-041/-042 BLADE FITTING

- MATERIAL: MAKE D3488-1/-2 FROM ALUMINUM 7075-T7351 ROUND BAR PER QQ-A-225/9 (REF. DART MATERIAL SPEC M7075T73R)
- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- INSTALL INSERTS AFTER POWDER COAT
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

NO. 28318
WORK ORDER

WITHOUT NOTICE
UNCONTROLLED COPY
ENGINEERING
RETURN TO
SHOP COPY



D3488-041 SHOWN (D3488-042 OPPOSITE)

RELEASED
06.03.15
PER OS
ELN #789

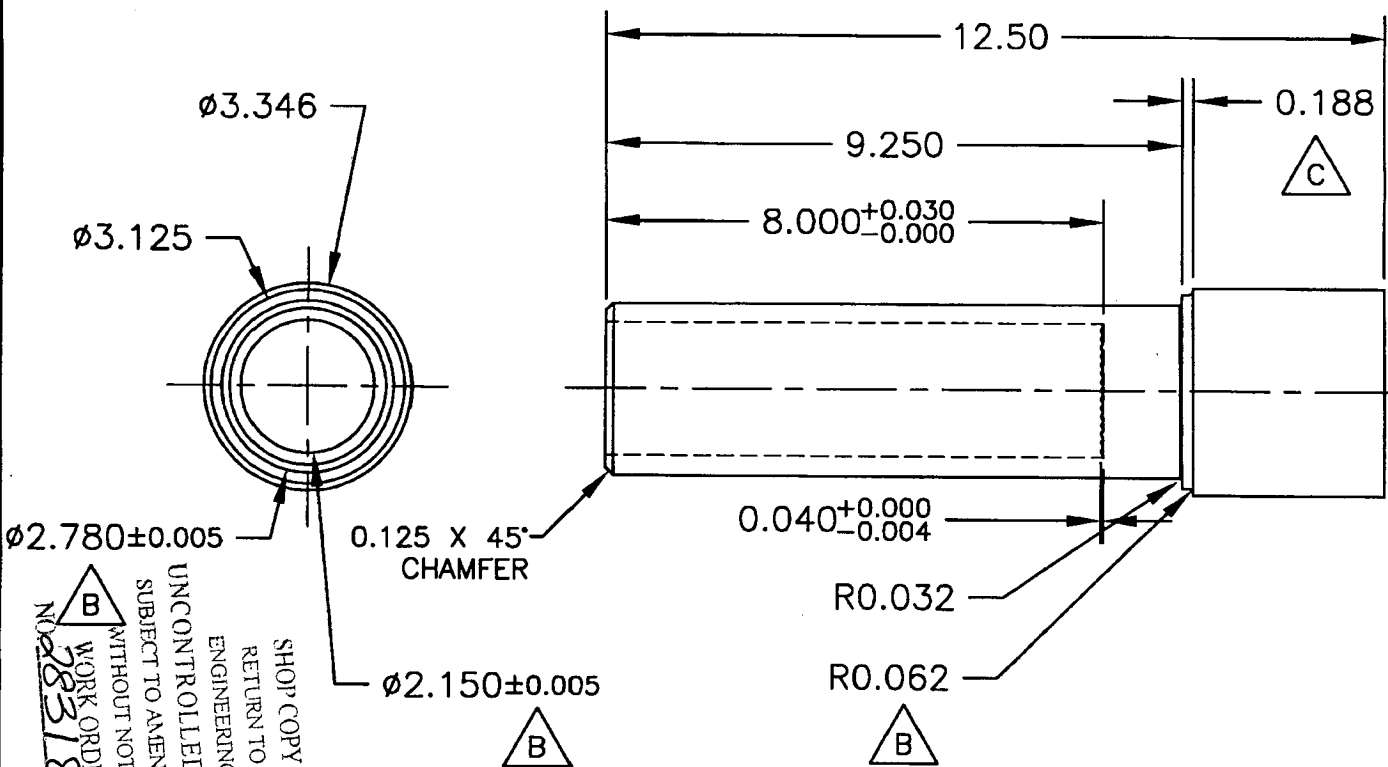
B	06.03.15	CHANGE THICKNESS
A	05.12.20	NEW ISSUE
DESIGN	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, MA
CHECKED	PH	DRAWING NO. D3488
DATE	06.03.15	TITLE BLADE FITTING
APPROVED	PH	REV. B SHEET 1 OF 1 SCALE 1:3

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DART

DESIGN	DRAWN BY	DART AEROSPACE USA, INC.	
PH	PH	PORT HADLOCK, WA	
CHECKED	APPROVED	DRAWING NO.	REV. D
PH	PH	DSK 101	SHEET 1 OF 1
DATE		TITLE	SCALE
06.05.09		D3488-1/-2 TURNING DETAIL	1:3
A	05.12.21	NEW ISSUE	
B	06.03.02	ADD TOLERANCES AND RADIUS	
C	06.04.17	0.188 WAS 0.125	
D	06.05.09	REMOVE DIAMETER FOR CHAMFER	



- 1) MATERIAL: MAKE FROM ALUMINUM 7075-T7351 ROUND BAR PER QQ-A-225/9 (REF. DART MATERIAL SPEC M7075T73R)
- 2) FINISH: NONE
- 3) BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 28318
DSK 101

**CERTIFICATE OF CONFORMITY****SOLD TO:**

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ont.
K6A 1K7

SHIPPED TO:

same

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>PART NAME</u>	<u>P.O. NUMBER</u>
20	DSK101	Support as per Dwg DSK101 D6103-003 B 28318	1987
20	DSK101	Support as per Dwg DSK101 D6103-003 B 28319	1987
40	D2968-5	Ring M4130NT3000W500 M102020 W/O 28267B	1987
20 22	D2968-5	Ring M4130NT3000W500 M102020 W/O 28268B	1987
20 22	D3407-5	Ring M174R3000 M18742 W/O 28333	1987

MATERIAL: supplied by DART

We hereby certify that the above parts were made in conformance with applicable drawings.

METEC Metal Technology Inc.

Shirley (Regula) Walz

BC 06-09-21

Vankleek Hill, September 20, 2006